# Abstracting Psychiatric Patient Data In General Hospitals

PETER L. HURLEY, B.S., and PHILIP H. PERSON, Jr., Ph.D.

FOR SEVERAL YEARS the Office of Biometry, National Institute of Mental Health, Public Health Service, has been collecting data on patients in public and private mental hospitals, public and private institutions for the mentally retarded, and psychiatric patients in general hospitals. During this time the number of known psychiatric admissions to general hospitals has been increasing. In 1963 total admissions were 212,000, based on a 63 percent response to the annual National Institute of Mental Health general hospital survey. An estimate that takes account of the under-reporting suggests that the total number of admissions is closer to 350,000. This is more than the total number of admissions to State and county mental hospitals in 1963. In addition, about 75 percent of psychiatric discharges from general hospitals are made directly to the community, suggesting that general hospitals may be serving extensively as transitional facilities or as alternatives to public mental hospitals.

Psychiatric facilities in general hospitals affect the number and characteristics of patients admitted to mental hospitals and other psychiatric facilities in areas they serve. Data collection methods for the general hospitals should be geared to determining the effect on these facilities.

*Mr. Hurley and Dr. Person are with the Office of Biometry, National Institute of Mental Health, Public Health Service.*

In the past the National Institute of Mental Health has collected from general hospitals only minimal data on psychiatric patients, including tabulations on the number of admissions, discharges, and deaths in the hospital during the year and the distribution of psychiatric discharges by diagnosis and sex.

The data collection forms have been geared to yearend tabulations of these categories and variables. Optionally, this requires a separate subsystem to record psychiatric admissions and discharges and characteristics of the patients, so that the needed data will be available for use at the year's end. The forms have been quite difficult to complete in some general hospitals. When a separate system is not used, it becomes necessary to search the hospital records merely to identify those pertaining to psychiatric patients, to say nothing about tabulating the requested data. The task is time consuming and difficult in hospitals with small proportions of discharged patients having psychiatric diagnoses. Not only has the data collected in the past been minimal, but the percent of hospitals reporting has been low (see table). A method is needed which will make the abstracting and compiling easier and provide a greater amount of useful information.

An obvious answer is to record certain basic data on each psychiatric patient at the time of the patient's discharge from the hospital. A form developed to meet these requirements is shown in the figure. The form contains the

patient's name, case number, age, psychiatric diagnosis, length of stay, and recommendation at the time of discharge. The part containing the patient's name can be removed prior to submission to the National Institute of Mental Health for processing and tabulation, since the names are of no use in data processing and analysis at the national level. Any followup, necessary because of discrepancies in the data, can be done with the hospital patient number. However, the name is of value for identification purposes within the hospital. The form is prepared in pads so carbon copies can be made easily.

The next step was to initiate a pilot study to evaluate the reporting form and method of collecting data. Because of the interest in this project expressed in Wisconsin, it was decided to pretest the form and method in several general hospitals in that State. The project had the support of the Wisconsin State Department of Public Welfare, the division of mental hygiene, and the division of hospitals and related services in the State board of health.

### Pilot Study Method

The initial list of general hospitals included a representative cross section of those in the State. Four variables were used in hospital selection: size of psychiatric patient load, geographic area, city size, and National Institute of Mental Health reporting history.

The hospitals selected for the pilot study covered the range of these variables but did not constitute a random sample of all general hospitals in Wisconsin. Hospitals on the initial list were visited to solicit their participation and cooperation in this survey, and 11 hospitals agreed to participate.

**Reporting record of general hospitals known to treat psychiatric patients, 1953–63**

| Year | Number of hospitals | | Percent of hospitals reporting |
|---|---|---|---|
| | Total | Reporting | |
| 1953 | 655 | 383 | 58.5 |
| 1954 | 557 | 357 | 64.1 |
| 1955 | 530 | 333 | 62.8 |
| 1956 | 534 | 382 | 71.5 |
| 1957 | 515 | 381 | 74.0 |
| 1958 | 510 | 374 | 73.3 |
| 1959 | 494 | 374 | 75.7 |
| 1960 | 583 | 388 | 66.6 |
| 1961 | 589 | 382 | 64.9 |
| 1962 | 585 | 392 | 67.0 |
| 1963 | 578 | 366 | 63.3 |

The medical record librarian in each participating hospital was asked to fill in one line of the form (see figure) for each psychiatric patient discharged during the 6-month period beginning in November 1962. Following is the definition of the patients used in the study:

> Include patients who are admitted to the hospital for inpatient treatment of a psychiatric disorder and also include patients for whom the psychiatric diagnostic workup and evaluation was performed and a mental disorder found even though the admission complaint was not known to be necessarily indicative of a psychiatric disorder. Do not include patients with a known psychiatric disorder at the time of admission who were admitted for nonpsychiatric treatment or diagnosis.

The latter requirement excluded persons on the rolls of other mental institutions or facilities and those who were admitted to general hospitals, for medical or surgical treatment only, or to clinics.

To help evaluate the pilot method, each librarian was asked, at the end of the reporting period, for comments concerning his experience with this method. The following evaluation summarizes the replies to the questionnaire provided for this purpose.

### Participants' Evaluation

*Form layout and content.* Layout and content were for the most part endorsed enthusiastically. The form seemed to be convenient and to fit well into the daily operations in the medical record offices.

*Pilot study method applied to large-scale surveys.* There were mixed reactions to the proposition of adopting a similar line-by-line form for annual or periodic use throughout the country. A majority of participating medical record librarians preferred this method of data collection. However, one did indicate a preference for the yearend method. This may suggest that some hospitals already have established systems for collecting information on psychiatric patients at the year's end. If so, it would be much simpler to produce tabulated information

at that time than to accumulate data on the pilot study forms.

*Definition and availability of information in medical records.* There were scattered comments on the definitions of certain variables and on difficulties experienced in obtaining information that was not in the record or was placed in the record at a later date. These observations emphasize the necessity for care in defining the variables in the categories and that any data collection system is dependent on the quality of the records or the source documents.

*Use of data.* The most interesting comments concerned use of the data by hospital personnel. The librarians reported no requests from their psychiatric or hospital staffs for information concerning psychiatric patients as a group. One respondent thought this information would be of use in the future if the reporting systems were established and working well within the hospital. It is possible that many hospital personnel were unaware of the kinds of information available from such data collection systems.

## Review of the Data

Review of data obtained from the pilot study illustrated the kinds and uses, actual and potential, of information provided by this data collection system. At the national level, the primary use of this data is description of the extent of service available in general hospitals in statistical terms. The data answer questions such as "How many people are using these services?" and "What are the characteristics of these users?" They give insight into the amount of psychiatric service needed by the population and what other types of resources would fit this need best. These questions are continually being asked by government administrators, legislators, and national organizations concerned with mental illness.

Such data can be useful to a hospital administrator in much the same way. A thorough and documented picture of the patients being served can be an invaluable aid to good hospital administration. It is a recognized fact that one can administer a program without statistics, but it is also a well-established principle that improvement and efficiency in administration require documentation of certain statistics that describe what is going on and light the way to areas that need improvement.

Age, sex, and length of stay distributions have definite implications for hospital administration and for planning future operations. Distributions of psychiatric diagnoses and prior psychiatric care give clues as to the types of psychiatric problems being seen at the hospital and hence, the types of facilities and services

**Sample data collecting form**

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FIGURE 1

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE, NATIONAL INSTITUTES OF HEALTH

PSYCHIATRIC PATIENTS IN GENERAL HOSPITALS

HOSPITAL IDENTIFICATION CODE | PAGE NO.

REPORT FOR YEAR ENDING

| DATE OF DIS-CHARGE | NAME | LINE NO. | (A) CASE NO. | (B) Age at discharge | (C) SEX: Male (1) | (C) SEX: Female (2) | (D) PRIOR CARE FOR MENTAL DISORDER: None | (D) Inpatient | (D) Outpatient | (E) REASON(S) FOR ADMISSION: Emergency | (E) Treatment | (E) Diagnosis | (F) STATE OF RESIDENCE | (G) PSYCHIATRIC DIAGNOSIS: Primary | Psychiatric diagnosis code number | Diagnosis made by: Psychiatrist | Other M. D. | (H) LENGTH OF STAY IN DAYS | (I) DISPOSITION: To own home (1) | To a mental institution (2) | To other facility or agency (3) | Died in hospital (4) | (J) FURTHER PSYCHIATRIC CARE RECOMMENDED: Yes (1) | No (2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | | | | | | | | | | | | | | | | | | | | | | |
| | | 12 | | | | | | | | | | | | | | | | | | | | | | |
| | | 13 | | | | | | | | | | | | | | | | | | | | | | |
| | | 14 | | | | | | | | | | | | | | | | | | | | | | |
| | | 15 | | | | | | | | | | | | | | | | | | | | | | |

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## Alternative Proposals

Hurley and Person assault a well-defined bastion of ignorance in their pilot effort to develop utilization and effectiveness rates for community general hospitals that treat psychiatric patients. Their effort is to be commended because the problem they consider is both significant and timely.

As planning commissions assume greater responsibility for developing long-range building and utilization plans for mental health resources, the need for complete, accurate, and comprehensive information about existing resources becomes critical. The proliferation of community mental health centers, expected during the next decade, magnifies the problem of conflicting interests of various semiautonomous agencies. Time is essential in solving the problem. Once competing (alternative) reporting systems are established, it becomes all but impossible to obtain a uniform system.

I would dispute that the efforts of the Model Reporting Area hospitals and clinics have contributed substantially to the compilation of comparable statistics for mental health programs across the nation. I would, however, suggest that the time has come to acknowledge that separate types of reporting procedures are necessary for patient accounting (or billing for services) and program utilization and effectiveness rates.

I suspect that most reporting systems have developed as byproducts of 100 percent patient accounting systems. Furthermore, this dependency on census-type reporting has damped the prospects of obtaining up-to-date relevant data for specific issues. The inertia of ongoing systems and the labor pains associated with new systems combine to make statistical reporting procedures unresponsive to change. With the advent of increased computer availability, a disturbing way of thinking is emerging among mental health program analysts. More and more reports are being requested in addition to, rather than instead of, established ones. This trend is based on the ease with which reports can be generated with computers once data are available. It does not, however, take account of the effort required to obtain the data, or prepare programs to generate reports, or analyze the reports so generated.

It occurs to me that national and State agencies could make their major contribution to mental health program planning by continuing to coordinate efforts to define uniform patient and program categories, by launching major efforts to develop sample survey procedures, and by establishing traveling teams to spot check procedures actually used.

I feel that Hurley and Person have opened a conversation which should be joined by mental health program analysts around the country who are weary of making-do with available data and have constructive alternatives to offer with respect to either data collection strategies, data content, or integration of program planning and data collection activities.—LAYLE E. WEEKS, *senior social research analyst, bureau of research, department of mental hygiene, State of California—Health and Welfare Agency.*

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the hospital has provided and should continue to provide. Characterizing patients in terms of these factors plus place of residence and disposition at discharge leads directly to evaluating a particular hospital's role as a community psychiatric resource. This type of evaluation is of particular importance to a community approach to mental health and to State agencies responsible for statewide mental health programs. Since these data were collected from a small number of hospitals not selected in a random manner, the data cannot be construed as being representative of psychiatric patients discharged from general hospitals in Wisconsin. However, they can illustrate ways of describing characteristics of people receiving psychiatric service in general hospitals.

### Special Problems

*Definition of psychiatric patient.* A major concern was the definition of a psychiatric patient to be included in the study. This is perhaps the largest problem in obtaining information on patients receiving psychiatric services and treatment in general hospitals. Many hospitals have separate psychiatric units, while other hospitals do not, preferring to treat psychiatric patients on general wards. Some hos-

pitals operate psychiatric units and also treat psychiatric patients in general medical-surgical wards.

In addition, there is a serious question as to who, in fact, is a psychiatric patient. The pilot study definition of a psychiatric patient depended on his having a psychiatric diagnosis as defined in the American Psychiatric Association's "Diagnostic and Statistical Manual—Mental Disorders" (*1*) or in the "International Classification of Diseases, Adapted for Indexing Hospital Records by Diseases and Operations" (*2*).

The pilot study definition of a psychiatric patient resulted in counting patients on as broad a base as one might wish. Patients with both primary and other than primary psychiatric diagnoses were included.

Other definitions of psychiatric patients could include only a part of the patients included in the pilot study. One might count as psychiatric patients only those discharged with a primary psychiatric diagnosis.

Another definition could reasonably be all patients admitted to the hospital specifically for treatment of a psychiatric disorder. A further example deals with operating a psychiatric unit. For administrative purposes, a hospital director might require information on all patients discharged from the psychiatric unit regardless of diagnosis or reason for admission.

These examples demonstrate the following points:

1. The question asked determines the definition of a psychiatric patient.
2. The definition strongly affects the number of patients reported in a survey and, hence, interpretations and decisions based on the survey results.

Clearly, then, a specific definition of a patient is required to answer a specific question. Both question and definition must be constructed carefully and be pertinent to the object of the survey.

## Conclusions

The results of the pilot study indicate that this method of data collection is feasible and offers several advantages over the yearend method currently used by the National Institute of Mental Health.

1. Line-by-line reporting allows more flexibility in tabulations. The yearend method of reporting, currently used, specifies a table of discharges by diagnosis and sex. From the line-by-line method several cross tabulations may be prepared, depending on the nature of the data and analysis.
2. In many hospitals the time devoted to abstracting data on a line-by-line basis is considerably less than that required by the yearend method.
3. The line-by-line method does not require a set of statistical tables at the year's end, as does the yearend method.
4. From the comments of the medical record librarians, it appears that the line-by-line method fits into the discharge procedures rather easily. It is less suitable for hospitals having a statistical data processing system that accomplishes the same goal. In fact, using a line-by-line form in such a hospital would inflict an unnecessary hardship on the medical record function. If this method were adopted for nationwide use, possibly on a sample basis, individual arrangements probably could be made when required data have already been abstracted and entered into a data processing system.

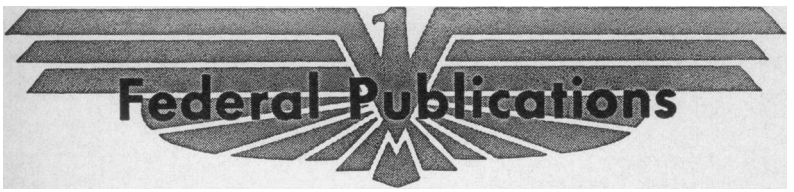
The data briefly reviewed in this paper illustrate the kinds of information that can result from collecting uniform data on psychiatric patients in general hospitals. Characterizations of the patients in this study are quite revealing from two different aspects. From the hospital administrator's point of view, such information provides a means of comparing the psychiatric department load with that of other hospital departments. Knowledge of the psychiatric patient load should help greatly in planning hospital operation, allocation of space and facilities, and disposition of various kinds of personnel. From a broader point of view, psychiatric patient data could be the basis for studies indicating the hospital's role as a community psychiatric resource in comparison with other facilities, such as public and private mental hospitals and outpatient psychiatric clinics. Because of the current interest in a community's providing and planning for the mental health needs of its citizens, it is becoming increasingly important to learn as much as possible about

psychiatric services available in the community, the psychiatric needs of the population, and the general hospital's role in the entire complex. Indeed, the data collecting method tested by this pilot study really represents a very modest effort in view of the knowledge necessary to plan and carry out effective and efficient psychiatric programs.


**REFERENCES**

(*1*) American Psychiatric Association, Mental Hospital Service: Diagnostic and statistical manual—mental disorders. Washington, D.C., 1952.

(*2*) U.S. Public Health Service: International classification of diseases, adapted for indexing hospital records by diseases and operations. PHS Publication No. 719 (revised). U.S. Government Printing Office, Washington, D.C., December 1962, sec. 5.


**Peptic Ulcer.** *PHS Publication No. 280 (Health Information Series No. 71); revised 1965; 13 pages; 15 cents.* Gives facts about peptic ulcer such as causes, symptoms, treatment, and complications. Discusses peptic ulcer and cancer and peptic ulcer and ulcerative colitis.

**Tuberculosis Beds in Hospitals and Sanatoria, June 30, 1965.** *PHS Publication No. 801; revised January 1966; 24 pages; 25 cents.* A directory of the major hospital resources available in the United States for the care of tuberculosis as reported in a survey made June 30, 1965. Includes data for non-Federal hospitals with 10 or more beds set aside for tuberculosis patients. Gives data for Federal hospitals which includes all available tuberculosis beds as reported by the Public Health Service, Division of Indian Health, Department of the Air Force, Department of the Army, Department of the Navy, and Veterans Administration.

**Lecture Preparation Guide.** *PHS Publication No. 1421; March 1966; 60 pages, 1 worksheet.* Consists of a guide and a situation analysis worksheet. A student following the instructions given in the guide for preparation of a lecture should be able to analyze the lecture situation, write an objective and outline so that the objective and conditions of the situation will be met, select and evaluate presentation aids, prepare for possible time changes and question-and-answer sessions, and also write a summary for distribution. Students using this guide should take 4–10 hours to prepare a lecture, although there is no set time limit.

**A Decade of Change in U.S. Hospitals, 1953–1963.** *1965; 49 pages; 40 cents.* Prepared by the Review and Analysis Division, Office of the Comptroller, Office of the Surgeon General, Department of the Army. Summarizes the changes in utilization, staffing, and costs in U.S. hospitals during the 10-year period 1953–63. Developed in two parts, the first part reviews the trends and factors causing the increased use of hospitals in the United States and analyzes the reasons for rapidly rising hospital costs. The second part compares the dramatic changes in Army hospitals with those in civilian hospitals and analyzes the differences in utilization, staffing, and costs between the two types of hospitals.

**Tuberculosis Today.** *PHS Publication No. 30 (Health Information Series No. 33); revised 1966; 12 pages; 10 cents.* Notes briefly some historical facts about tuberculosis. Explains in simple terms what the tuberculosis problem is today, how the disease is transmitted, how it affects people, what tests are needed for diagnosis, and the modern methods of treatment. Summarizes the national program and emphasizes the need for early detection and treatment.

**Publications of the Division of Hospital and Medical Facilities. An annotated bibliography.** *PHS Publication No. 930–G–3; revised 1965; 15 pages; 20 cents.* Reflects the broadened scope of the Division's activities. Lists and describes publications related to the health facility construction programs for which Federal grants are provided: Hill-Burton, health professions education, and facilities for the mentally retarded and the mentally ill. Supersedes the edition "Hill-Burton Publications, an Annotated Bibliography."

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